CLAIMS:

What is claimed is:

1. A center punch comprising:

an end cap;

a hammer that is spring-loaded with a spring against the end cap and positioned along an axis;

a punch head assembly positioned on the axis;

a latch configured to reversibly restrain movement of the hammer along the axis in response to rotational movement of the latch about the axis;

wherein a force applied to the end cap causes the spring to compress,

in response to compression of the spring, the latch rotates about the axis in a first direction and releases the hammer, and

in response to the hammer being released, the spring becomes uncompressed, causing the hammer to move along the axis to strike the punch head assembly.

2. The center punch of claim 1, wherein in response to the hammer having moved along the axis, the latch rotates in a second direction and restrains the hammer.

3. The center punch of claim 1, further comprising:

a cam sleeve having a first cam surface; and

a cam pin attached to the latch,

wherein compression of the spring causes the cam pin to engage the first cam surface, and

the cam pin's engaging the first cam surface causes the latch to rotate in the first direction.

4. The center punch of claim 3, wherein the cam sleeve includes a second cam surface,

movement of the hammer along the axis causes the cam pin to engage the second cam surface, and

the cam pin's engaging the second cam surface causes the latch to rotate in the second direction.

5. The center punch of claim 3, wherein the cam sleeve includes a groove,

the hammer includes a pin that is positioned within the groove, and

the pin's placement within the groove prevents the hammer from rotating about the axis.

6. The center punch of claim 1, wherein the latch includes a shaft with shaft splines,

the hammer includes a bore with bore splines,

the shaft is positioned to fit within the bore,

rotation of the latch in the first direction causes the shaft splines to rotate into alignment with the bore splines,

rotation of the latch in the second direction causes the shaft splines to rotate out of alignment with the bore splines.

7. The center punch of claim 1, wherein the punch head assembly includes a punch head and an anvil, and

the punch head is attached to the anvil.

8. The center punch of claim 1, further comprising:

an alignment fixture including a bore and adapted to hold a fixed location with respect to a work surface

wherein the punch head assembly is positioned within the bore of the alignment fixture so as to hold the punch head in a stationary position on the work surface.

9. The center punch of claim 1, wherein the alignment fixture includes a flat surface adapted to engage a flat work surface.

10. The center punch of claim 1, wherein the alignment fixture includes a concave surface adapted to engage a work surface that is not flat.

11. The center punch of claim 10, wherein the concave surface is adapted to engage a curved work surface.